

Application No. 09/934,947  
Amendment dated March 16, 2006  
Reply to Office Action dated February 15, 2006

Docket No. 1232-4756

**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-47 (CANCELLED):

48 (NEW): An exposure apparatus comprising:

an illumination optical system for illuminating a reticle using light from a light source; and

a projection optical system for projecting a repetitive pattern on the reticle onto an object to be exposed,

wherein said projection optical system includes an optical element comprising an isometric crystal,

wherein the angle between the  $[0\ 0\ 1]$  axis of the isometric crystal and the optical axis of said optical element is set lower than  $10^\circ$ , and

wherein the  $[0\ 1\ 0]$  axis perpendicular to the  $[0\ 0\ 1]$  axis in the isometric crystal is inclined to a direction of repetition of the pattern by  $10^\circ$  or greater.

49 (NEW): An exposure apparatus according to claim 48, wherein the direction of repetition the pattern forms an angle of  $0^\circ$ ,  $45^\circ$  or  $90^\circ$  with a reference direction of the reticle.

50 (NEW): An exposure apparatus according to claim 48, wherein said angle between the  $[0\ 0\ 1]$  axis of the isometric crystal and the optical axis of said optical element is  $0^\circ$ .

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51 (NEW): An exposure apparatus according to claim 48, wherein the maximum angle between the light incident on the optical element and the optical axis of the optical element is  $25^\circ$  or greater.

52 (NEW): An exposure apparatus according to claim 48, wherein said projection optical system includes  $n$  optical elements, arranged around an optical axis so that the  $[0\ 1\ 0]$  axis of one of the optical elements and the  $[0\ 1\ 0]$  axis of another of the optical elements form an angle within  $90^\circ/n \pm 10^\circ$  with each other.

53 (NEW): A device manufacturing method comprising the steps of:  
exposing an object using the exposure apparatus according to claim 48; and  
developing the object that has been exposed.